



## Gulf of Mexico Harmful Algal Bloom Bulletin

Region: Texas

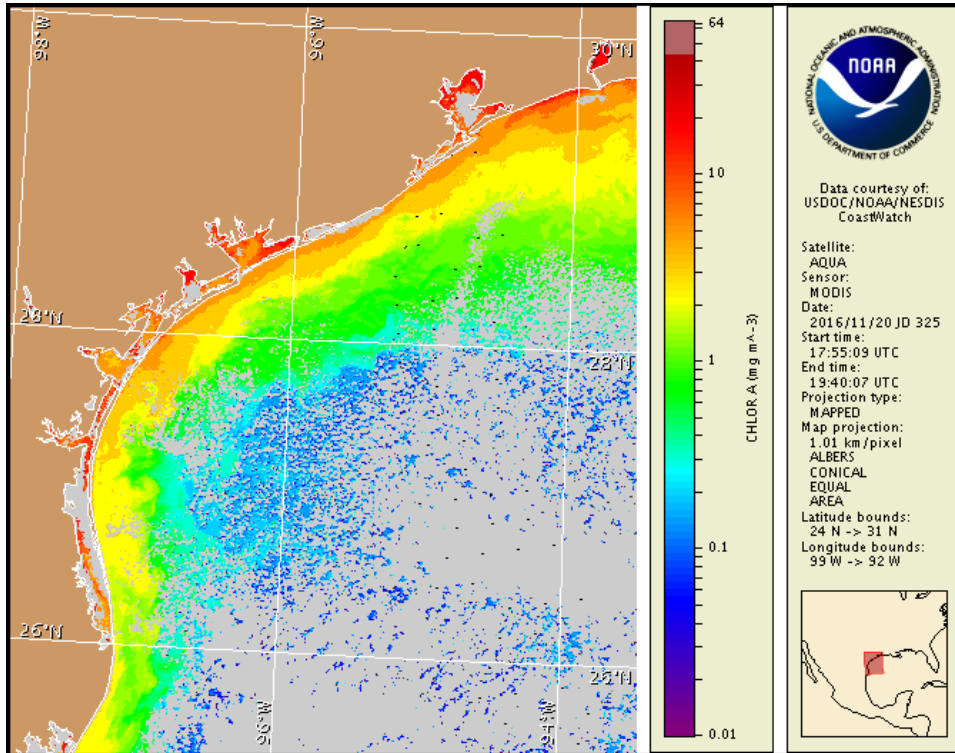
Monday, 21 November 2016

NOAA National Ocean Service

NOAA Satellite and Information Service

NOAA National Weather Service

Last bulletin: Monday, November 14, 2016



Satellite chlorophyll image with possible *K. brevis* HAB areas shown by red polygon(s), when applicable. Points represent cell concentration sampling data from November 11 to 18: red (high), orange (medium), yellow (low b), brown (low a), blue (very low b), purple (very low a), pink (present), and green (not present). Cell count data are provided by Texas Parks and Wildlife Department. For a list of sample providers and a key to the cell concentration categories, please see the HAB-OFS bulletin guide:

[http://tidesandcurrents.noaa.gov/hab/hab\\_publication/habfs\\_bulletin\\_guide.pdf](http://tidesandcurrents.noaa.gov/hab/hab_publication/habfs_bulletin_guide.pdf)

Detailed sample information can be obtained through the Texas Parks and Wildlife Department at:

<http://www.tpwd.state.tx.us/landwater/water/enviroconcerns/hab/redtide/status.phtml>

To see previous bulletins and forecasts for other Harmful Algal Bloom Bulletin regions, visit the NOAA Harmful Algal Bloom Operational Forecast System bulletin archive:

<http://tidesandcurrents.noaa.gov/hab/bulletins.html>

## Conditions Report

*Karenia brevis* (commonly known as Texas red tide) ranges from not present to low concentrations along the coast of Texas. No respiratory irritation is expected alongshore Texas Monday, November 21 through Monday, November 28.

Check [http://tidesandcurrents.noaa.gov/hab/beach\\_conditions.html](http://tidesandcurrents.noaa.gov/hab/beach_conditions.html) for recent, local observations.

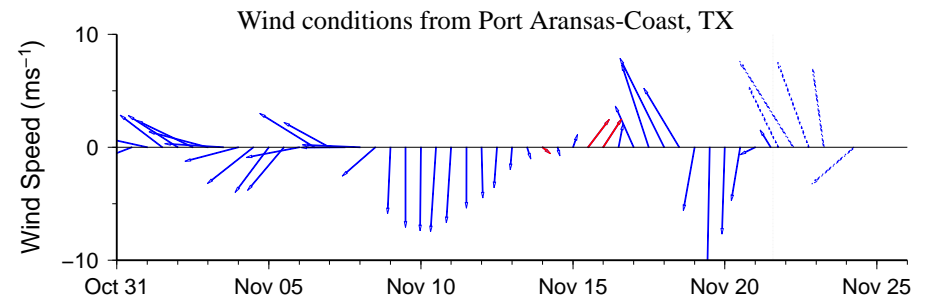
## Analysis

Sampling from the Texas A&M University's Imaging FlowCytobot (IFCB), located on the Port Aransas ship channel, indicates that *Karenia sp.* concentrations range between 'background' and 'low a' (TAMU; 11/14-11/21). The IFCB concentrations include *Karenia brevis* cells as well as *K. mikimotoi* and *K. papilionacea*. For information on area shellfish restrictions, contact the Texas Department of State Health Services.

In recent ensemble imagery (MODIS Aqua, 11/20; shown left) elevated to high chlorophyll ( $2-17 \mu\text{g/L}$ ) is visible along- and off-shore from Sabine Pass to south of the Rio Grande. Elevated chlorophyll is not indicative of the presence of *K. brevis* and is most likely due to the resuspension of benthic chlorophyll and sediments along the coast.

Forecast models based on predicted near-surface currents indicate a potential maximum transport of 10km south from the Port Aransas region from November 20-24.

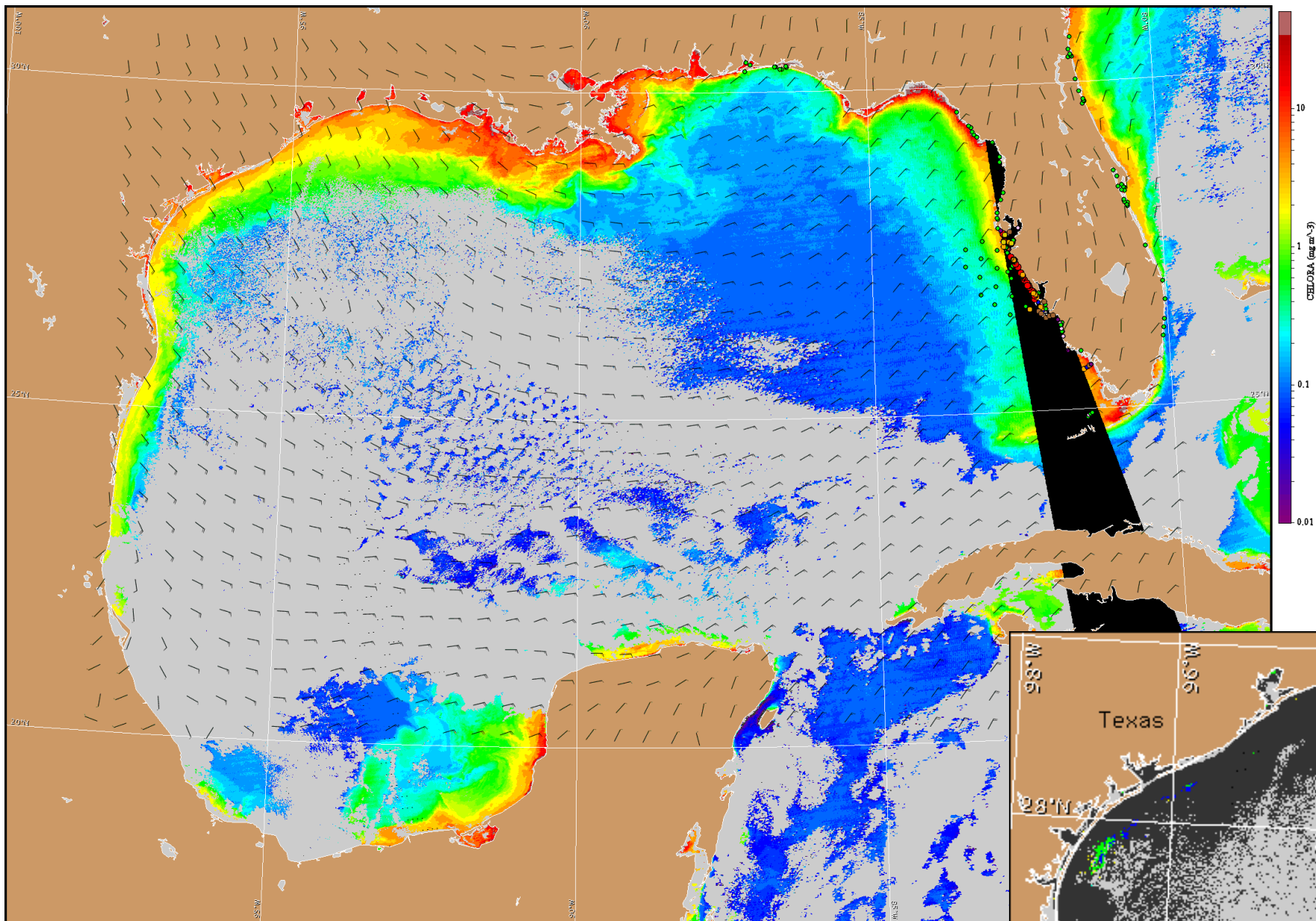
Kavanaugh, Lalime



Wind speed and direction are averaged over 12 hours from buoy measurements. Length of line indicates speed; angle indicates direction. Red indicates that the wind direction favors upwelling near the coast. Values to the left of the dotted vertical line are measured values; values to the right are forecasts. Wind observation and forecast data provided by NOAA's National Weather Service (NWS).

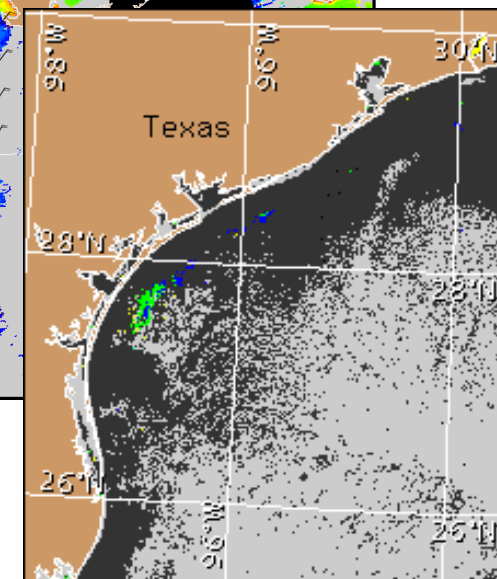
## Wind Analysis

**Port Aransas to Matagorda Ship Channel:** Southeast to south winds (5-20kn, 3-10m/s) today through Tuesday night. West winds (5-10kn, 3-5m/s) Wednesday shifting north in the afternoon. Northeast winds (5-10kn) Wednesday night. East to southeast winds (5-10kn) Thursday through Thursday night. Northeast winds (5-15kn, 3-8m/s) Friday through Friday night.



Satellite chlorophyll image and forecast winds for November 22, 2016 06Z with points representing cell concentration sampling data from November 11 to 18: red (high), orange (medium), yellow (low b), brown (low a), blue (very low b), purple (very low a), pink (present), and green (not present). Cell count data are provided by Texas Parks and Wildlife Department. For a list of sample providers and a key to the cell concentration categories, please see the HAB-OFS bulletin guide:

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Verified and suspected HAB areas shown in red. Other areas with *K. brevis* optical characteristics shown in yellow (see p. 1 analysis for interpretation).